Docket No.: 1163-0536PUS1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Masashi TAMURA et al.

Application No.: 10/553,424 Confirmation No.: 1484

Filed: October 18, 2005 Art Unit: 2624

For: IMAGE PROCESSING METHOD Examiner: Michael A. NEWMAN

REPLY BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Madam:

As required under § 41.37(a), this Reply Brief is being filed in furtherance of said Notice of Appeal filed in this case on September 23, 2008.

This Response Brief contains **Remarks** which begin on page 2 of this paper.

Remarks

The Examiner, in his Answer of March 11, 2009, clarifies and expands on his interpretation of the limitations of independent claim 5. Specifically, the Examiner now presents the argument that "the multi-value image data, calculated by the A/D (analog-to-digital) converter from the analog video signal output from the camera, can reasonably be interpreted as the calculated feature values in the claim language." (Page 6 of Examiner's Answer). Appellants respectfully disagree.

Claim 5

Independent claim 5 pertains to an image processing method, that method comprising "a feature value calculation step of calculating feature values of micro regions in a specified region having a pixel of interest at a center, from pickup results of an image pickup device that has a color filter with a particular color at each of pixels arrayed two-dimensionally; a binarization step of binarizing the feature values of the micro regions calculated by the feature value calculation step; a contour detection step of detecting a contour using the feature values binarized by the binarization step; and an image signal value correction step of correcting an image signal value of the pixel of interest using image signal values of a plurality of pixels including the pixel of interest in a same direction as the contour detected by the contour detection step."

The claim pertains, therefore, to the adjustment of pixel-level image signal values based in part on a contour detected from binarized feature values. Appellants respectfully submit that the term "multi-value image data" employed by the Examiner is analogous to the "image signal value of the pixel" recited in independent claim 5.

Examiner's Interpretation Rationale

The Examiner agrees that, as defined in the specification, the term "feature value" is inconsistent with the Examiner's interpretation of multi-value image data as a "feature value," but nonetheless maintains that absent an equally specific definition in the claims, his interpretation is not unreasonable because limitations from the specification are not read into the claims (Page 8 of Examiner's Answer). Appellants respectfully disagree.

Feature Values Are Not Pixel Values

Independent claim 5 states that "an image signal value of the pixel" is corrected based on values of adjacent pixels having the same direction. The direction of a is pixel determined based on a contour detection step "using feature values binarized by the binarization step." The claim therefore uses values of adjacent pixels to adjust the value of a particular pixel, with adjacent values selected based on the binarized, calculated feature values of micro regions of pixels.

Since independent claim 5 recites, as distinct elements, the calculated "feature values" and the "image signal value of the pixel," the two terms cannot have the same meaning. The Examiner may not ignore the fact that independent claim 5 contains the concept of "multi-value image data" in the claim limitations "image signal value of the pixel" and "image signal values of a plurality of pixels," both of which are wholly distinct from a "feature value." If claim 5 was meant to be construed as using the image signal value of a pixel to determine the direction of that pixel, there would be no need for the claim limitation of a "feature value" as the concept of the "image signal value of the pixel" is already present in the claim.

Feature Values Are Calculated From Pixels

Furthermore, independent claim 5 specifically requires "a feature value calculation step of calculating feature values of micro regions in a specified region having a pixel of interest at a center, from pickup results of an image pickup device that has a color filter with a particular color at each of pixels arrayed two-dimensionally." The micro-regions in question are in a specified region having a pixel of interest at a center. The micro-regions being subjected to feature value calculation are, therefore, themselves composed of pixel-level image data. If the micro-region does not contain pixels (i.e. it is purely analog video signal) then it cannot be part of a region having a pixel of interest at a center thereof.

If, as the Examiner contends, a calculated feature value may be interpreted to be "multi-value image data, calculated by the A/D converter from the analog video signal output from the

camera," then nothing would be calculated during feature value calculation. The A/D conversion is required to produce pixel data from analog video signal output. The feature value calculation step, as defined in independent claim 5, calculates feature values from micro-regions of an image around a particular pixel. If there are no pixels, there can be no calculation of feature values.

At least in view of the above, Appellants maintain that is incorrect and unreasonable to suggest that "the multi-value image data, calculated by the A/D (analog-to-digital) converter from the analog video signal output from the camera, can reasonably be interpreted as the calculated feature values in the claim language." Multi-value image data, in the form of pixels, is a required input to the feature value calculation step of independent claim 5, so the feature values calculated thereby must inherently be something other than the image signal values of the pixels.

Examiner's Interpretation Inconsistent With Specification

Furthermore, throughout the specification a "feature value" is discussed as something calculated from and used, indirectly, to modify the "image signal value of the pixel." Specifically, the specification states that the feature values are calculated from "pickup color signals of the pixels" (Specification, Page 10, line 27 – Page 11, line 12). Therefore, as used in the specification, the term "feature value" is something that is calculated based on the "image signal value of the pixel." The two terms are, as used in the specification, different in their scope and meaning.

Although limitations from the specification are not read into the claims, the way a term is used and defined in the specification determines its scope and context within the claims. "The person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Philips v. AWH Corp*, 415 F.3d 1303, 1313

Based on the way the specification defines the terms used in independent claim 5, Appellants respectfully submit that the Examiner is incorrect in his interpretation of the term

"feature value." Specifically, because an "image signal value of the pixel" is a separately used and defined term in both the specification and the claims, the Examiner may not include the meaning of "image signal value of the pixel" as part of the term "feature value." Such an interpretation is clearly inconsistent with the way these terms are used in the specification and therefore unreasonably broad.

Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Naphtali Y. Matlis, Reg. No. 61,592 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: May 8, 2009

Respectfully submitted,

By _____

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